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VICE PRESIDENT, ENVIRONMENT, SAFETY & OPERATIONS

January 18, 2000

Dockets Facility
U.S. Department of Transportation
Room PL-401
400 Seventh Street, SW
Washington, DC 20590-0001

RE: [Docket No. RSPA-99-6355; Notice 1]
Pipeline Safety: Enhance Safety and Environmental Protection for Gas Transmission and Hazardous Liquid Pipelines in High Consequence Areas

The Interstate Natural Gas Association of America (INGAA) is filing the attached comments on Docket RSPA-99-6355 in both electronic form and via mail. These comments are in addition to the comments presented at the public meeting on November 18, 2000.

INGAA represents the majority all of the major interstate natural gas transmission companies operating in the United States and interprovincial pipelines operating in Canada as well as natural gas companies in Mexico and Europe. INGAA's United States members, which account for over 80 percent of all natural gas transported and sold in interstate commerce, are regulated by the Office of Pipeline Safety (OPS), Department of Transportation. INGAA's members safely transport over 25% of the nation's energy needs.

Sincerely,

Terry Boss

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Pipeline Safety: Enhance Safety and Environmental Protection for Gas Transmission and Hazardous Liquid Pipelines in High Consequence Areas

COMMENTS OF THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Summary

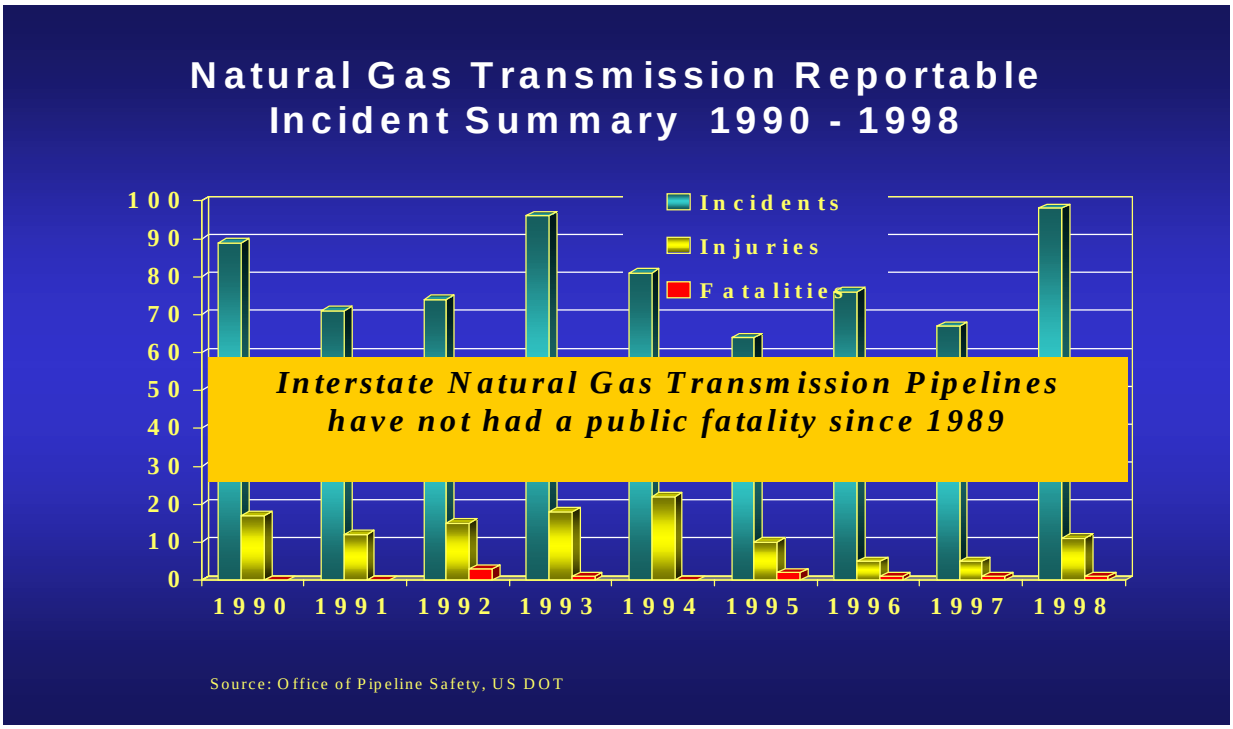
INGAA is prepared to work with the OPS in defining the target problem, assessing present regulations and practices, develop and test alternative solutions, and make recommendations for regulatory action, if needed, based on cost benefit analysis.

INGAA will allocate significant resources to this initiative and has at its disposal many years of research on pipeline integrity.

In assessing the need for regulatory change, INGAA recommends that OPS give credit for regulatory requirements already in place for natural gas pipelines in high consequence areas.

Background

INGAA is a strong proponent of integrity management and has encouraged its members to have proactive integrity management programs above and beyond the Federal Natural Gas Pipeline Safety Regulations (49CFR192). INGAA's members are in the business of energy transport and are keenly aware of the need for integrity of the nation's pipeline infrastructure. INGAA believes that 49CFR192, in specific, was developed on the principle of integrity management and goes a long way to prescribe appropriate processes and practices in and of itself. The use of 49CFR192 and the additional voluntary industry practices has resulted in an impressive safety record as depicted in the chart below.



INGAA recommends that the present regulations be examined and presented in a simplified format, a version more understandable to the general public, which describes the intent of the present regulations to maintain the integrity of pipelines. 49CFR192 was modeled after the natural gas pipeline safety code, American National Standards Institute B31.8 (ANSI B31.8). ANSI 31.8 incorporates many practices that are implemented when a pipeline traverses higher density populated areas or the population density increases around a pipeline. These practices, their origin, and their intention have been documented in the GRI report titled "Development of the B31.8 Code and Federal Pipeline Safety Regulations: Implications for today's Natural Gas Pipeline System". This report is useful in identifying and communicating the intent and the solutions for integrity management that are now incorporated in the present pipeline safety regulations and can be used as a basis for the development of a simplified report.

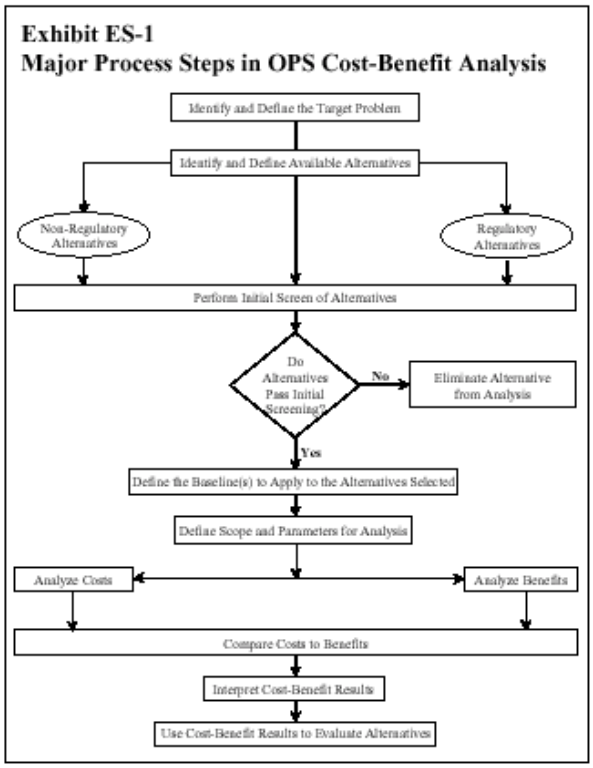
It is essential that the integrity benefits, unique to 49CFR192, be identified and their impact quantified as part of this effort to examine and review the integrity aspects of the pipeline safety regulations. Among these unique requirements, is the fact that 49CFR192 already defines consequence areas through class designation and defines proactive efforts to reduce risk for those higher consequence areas.

Analysis of Needs

INGAA has identified the possibility that this effort will have significant impact to consumers of natural gas and the general public. INGAA adamantly feels that it is in the best interest in the public and natural gas consumers that a wide-ranging and diligent effort of the assessment of needs and solutions be conducted.

Methodology

INGAA recommends that OPS examine this issue of integrity analysis utilizing the methodology incorporated in the "A Collaborative Framework for Office of Pipeline Safety Cost-Benefit Analyses" developed by the Joint OPS Stakeholder Workgroup as depicted below. This process was developed to satisfy the risk assessment / cost benefit requirements of the Pipeline Safety Act of 1996.



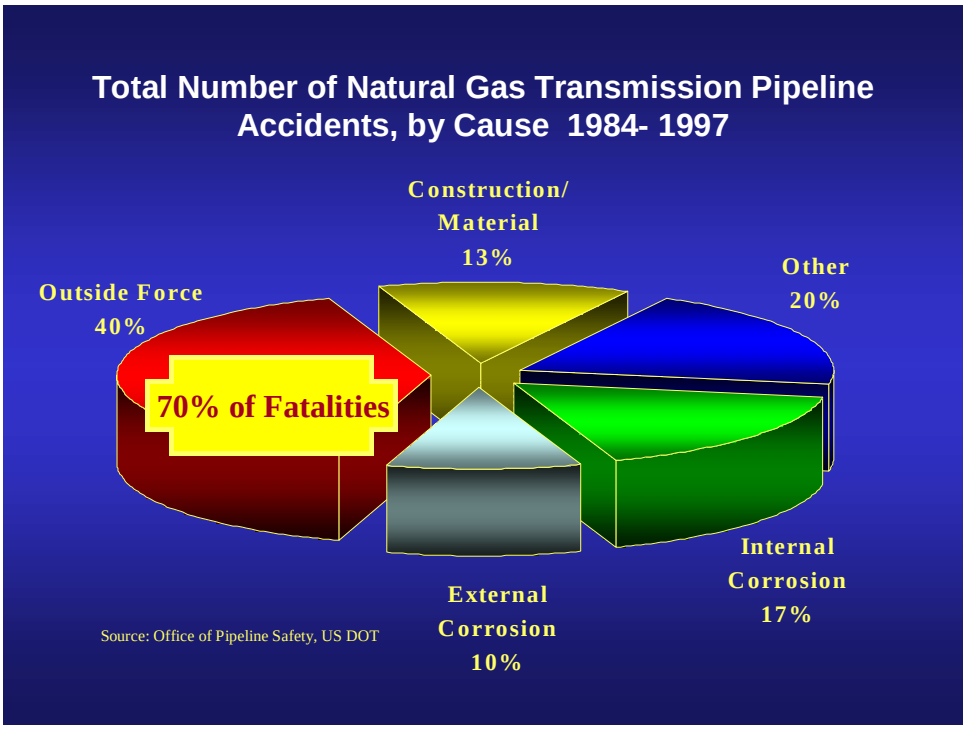
INGAA recommends that first, the target problem needs to be identified. The goals needed to solve the target problem should be developed to be both realistic and measurable. For example, a goal can be: reduce outside force fatalities on natural gas transmission pipelines by 20%. Next, the effectiveness of the existing 49CFR192 regulations needs to be assessed in satisfying these goals. Following this assessment, gaps between the benefits derived from regulations and the intended objective of this initiative should be clearly

delineated. Finally, the proactive voluntary practices of the pipeline operators needs to be assessed to determine the benefits and costs of the new regulatory initiative.

INGAA stands ready to work cooperatively with OPS in identification of the target problem and the goals.

Definition of High Consequence Areas

INGAA recommends that OPS cooperatively work with the industry to define high consequence areas. INGAA believes that the present incident reporting system correctly identifies the consequences of reportable incidents and can be used as a tool to assist in the definition of high consequence areas. For example, as depicted below, historical statistics have identified outside force damage as the most significant cause of natural gas transmission pipeline failures. INGAA will provide statistics, information, and analysis of historical reportable incidents to assist in the development of this definition.



INGAA believes the primary function of the natural gas pipeline safety regulations is to prevent the occurrence of fatalities and injuries. Obviously, when the population density increases around a natural gas pipeline there is an increased risk that consequences of a single incident will involve more than one person. Population density has been used in the past in the design of the industry codes and the subsequent 49CFR192. This should be the prime focus of the definition of high consequence areas for natural gas transmission

pipelines. The original authors of the ANSI B31.8 code incorporated this philosophy (class location) in the design of the code and it has provided a consistent methodology to assess population density. It is important that an analysis of fatalities and injuries caused by incidents be segregated among three groups; public, employees and underground excavators. This will assist in assessing both the consequences and the practices used to prevent those occurrences. Care must be taken in this assessment because some of the practices used to prevent the occurrences of incidents may increase the risk to underground excavators and employees.

INGAA recommends that environmental damage and property damage should also be considered in the definition of high consequence areas, but it appears to be significantly less of a factor, due to the constrained nature of gas transmission pipeline failure (within the corridor) and the relatively inert impact of released natural gas to the environment. In turn, these consequences need to be balanced with the results of the preventative and mitigative practices that they themselves may have impact on the environment and property damage. For example, a bellhole used for the examination of pipe will disturb as much property as a gas pipeline failure that did not ignite.

INGAA recommends that that natural gas transmission pipelines be examined separately from pipelines that carry other commodities. The characteristics of the product carried in the pipeline can affect the failure cause as well as the consequences. For example, natural gas is lighter than air and will rise when released to an open atmosphere as compared with other products that may accumulate in low elevation areas. The methodology for performing the assessment of consequences of pipeline failures may be consistent, but the results can vary widely depending on the product transported. Pertinent information for this assessment includes; the characteristics of natural gas, the results of the historical releases, and the subsequent consequences of different types of failure causes. For example, outside force damage generally results in greater human impact because of the proximity of the excavator to the incident. Empirical research is available on these subjects as well as statistical information concerning consequences from previous failures.

INGAA recommends that OPS examine the present class location system unique to 49CFR192 as a starting point for the definition of a high consequence area for natural gas transmission pipelines. This concept includes the corridor concept that emulates the impacted area of an incident. Population density has been used in the past in the design of the industry codes and the subsequent 49CFR192. This should be the prime focus of the definition of high consequence areas.

Assessment of Alternative Solutions

INGAA recommends that each major failure cause be examined and alternatives for prevention or mitigation of these causes be assessed separately. Many of the technologies and processes proposed as solutions are limited in their applicability in identifying and characterizing problems. It would be unfortunate if a regulation were developed that applies an inordinate amount of resources to a solution that does not materially impact the main goal of the pipeline safety regulations. The risk assessment/cost benefit methodology incorporated in the previously mentioned process establishes a consistent methodology for assessing this impact.

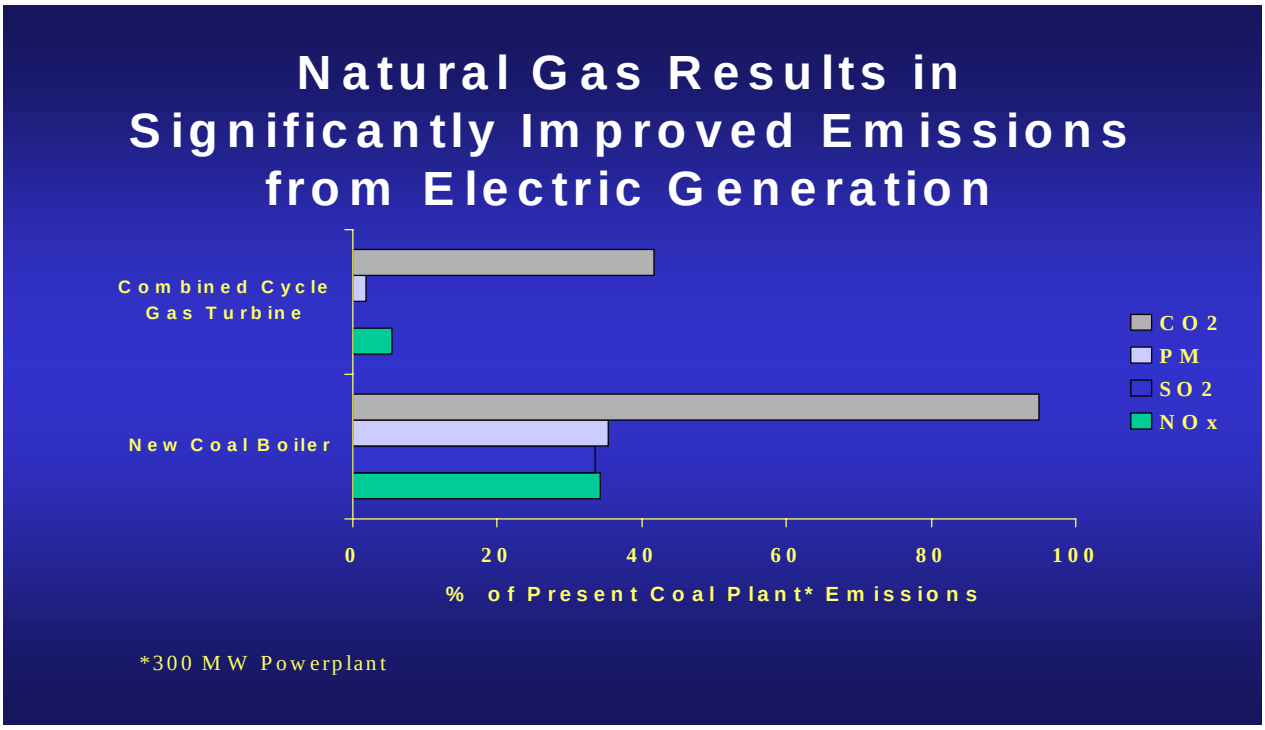
The methodology in the process includes the assessment of present practices both required and voluntary on the problem. In the case of natural gas transmission pipelines, a system is already incorporated in the regulations that assess the impact of population density and mandates certain practices to mitigate this impact. In addition, INGAA members have integrity management programs that augment the required practices. These voluntary efforts should be considered in the assessment of the improvement in safety that will result from the implementation of required practices.

Risk Assessment / Cost Benefit

INGAA stands willing to assist OPS in conducting risk assessment cost benefit analysis of this issue. The purpose of the cost benefit analysis is to assess the impact of the solutions on the general public. A preferred solution is one that obtains the safety goals with minimal impact to the general public.

Preliminary analysis of varied periodic inspection and testing solutions for natural gas transmission pipelines indicate costs to consumers could be up to $1.5 billion per year. This increased level of inspection and testing activity could also result in a disruption of normal business to natural gas consumers. The overall impact of this effect could be a reduction the use of natural gas as an energy source or an increase in energy costs resulting in an inflationary impact to the American economy.

The increase in delivered cost of natural gas will have a significant impact to a key new market for natural gas, electric generation. Presently, natural gas is competing with coal as an energy source on a cost basis. Any regulations that increase the cost of natural gas relative to coal as an energy source for electric generation will result in increased air emissions as depicted below.



It appears that landowners along the pipeline will be impacted significantly as new facilities could be constructed and the present right-of-ways disturbed. The amount of methane, a key component natural gas and catalogued as a greenhouse gas, discharged into the air, could increase significantly as additional inspection and maintenance techniques are required. The use of certain inspection techniques can also have impact on the environment if not properly mitigated. For example the hydrostatic testing of pipelines may result in the increase of total dissolved solids contained in the test water requiring extensive quality testing and filtering before disposal.

In addition, as with any industrial activity, the increase in inspection and maintenance activity will increase the risk of industrial accidents. The level of excavation appears to increase significantly with some of the proposals being discussed and could result in an increase of outside force damages to natural gas transmission pipelines as well as other underground infrastructure facilities.

As stated before, INGAA is committed to assist OPS in assessing the impact of these proposed solution and their costs and benefits.

Structure of Solution

After the needs have been identified, INGAA recommends that the solutions, if needed, be developed on a dual track system, a prescriptive solution and a performance approach. The first solution would build off of the present

regulations that incorporate the concepts identified by the meeting notice. If needed, additional language could be added to the present regulations and the present sections modified. The second methodology would utilize some of the lessons learned in the risk management demonstration program and would encompass a more customized and comprehensive performance based approach to integrity management process.

INGAA has identified four items of possible overlap of this initiative with the present natural gas pipeline safety regulations that need to be considered during the development of solutions. Essentially, high consequence areas have already been considered and implemented in the natural gas pipeline safety regulations (49CFR192) as pointed out earlier, but not in the liquid pipeline safety regulations (49CFR195). In reviewing the solutions of this initiative, it is important that both liquid and gas pipelines be assessed from the same basis, rather than layering on additional criteria to already effective risk mitigation techniques utilized by the natural gas system.

In order of importance:

1. Present safety regulations require additional practices that result in a higher safety factor in high-density populated areas and the pipeline operators should get credit for these practices to maintain integrity.

2. Present pipeline safety regulations require the change out of pipe if there is a significant increase in population density. Operators should have the option of increasing inspection and maintenance activities in those areas in lieu of replacing the pipe.

3. Present pipeline safety regulations require that during the building of a new pipeline, additional safety factors be incorporated in the design, construction, and operation of these facilities. Operators should have the option of increasing inspection and maintenance activities in lieu of those practices to maintain integrity.

4. Present pipeline safety regulations require the increase in safety factors in areas of high population density. Operators should have the option of uprating facilities in these areas by increasing inspection and maintenance activities to maintain integrity.

A. Prescriptive Approach

INGAA recommends that the effectiveness of the existing 49CFR192 consequence based requirements be assessed to determine their effect satisfying the goal of this initiative. The gap, if any, between the benefits of these present requirements in 49CFR192 and the intended goal should be clearly identified.

Once these gaps are delineated, INGAA supports working with the OPS to develop a set of prescriptive requirements that can be added to the present regulations to resolve those gaps - which might include, among other things, issues such as improved underground damage protection systems and periodic inspection to confirm the effectiveness of the currently prescribed integrity maintenance efforts.

Additionally, it appears that an issue has already identified in the public meeting. 49CFR192 definitions of consequence areas create more classifications than just "high consequence area" as envisioned by this notice. As such, the definition of high consequence areas for gas pipelines will likely be a subset of the current class definition as provided in 49CFR192.

This prescriptive approach, if needed, will result in an effective regulatory addition that builds on the strength of the current regulatory scheme without introducing overlapping or expensive and unproductive requirements and will allow operators to use the premises of the current regulations in moving forward.

B. Performance Approach

In addition to this prescriptive, but fundamentally essential approach, INGAA recommends that an alternate regulatory venue be developed to comply with this initiative. This alternate path would be based on a more customized and comprehensive performance based approach to integrity management. This performance-based approach would encompass many of the principles of the OPS's current Risk Management initiative. In this approach, many of the issues resolved in the prescriptive approach, including the definition of high consequence areas, would be incorporated. Additionally, a standard would be developed defining threat issues that must be evaluated and quantified as well as the corresponding integrity management premises that must be protected by the plan's implementation.

This approach would require operators to specifically address the issues that are generically and conservatively addressed in the current regulations and would require operators to tailor unique plans to each unique situation. This response may exceed the current regulations in some areas and not in others based on the actual unique situation, its corresponding risks and the effectiveness of the integrity management components.

This approach, albeit much more demanding on the part of both Industry and the Office of Pipeline Safety, has the potential to increase the level of pipeline safety and the effectiveness in achieving it. This approach will take longer to accomplish than the prescriptive approach due to the need to develop a standard and the time frame required for operators to develop and implement

such a program. As a result, the prescriptive approach needs to be addressed first and this performance based approach subsequently.

Related Efforts

There are other related issues that need to be addressed to successfully build the confidence of all stakeholders regarding the integrity management efforts regarding pipeline safety. Among these are, public education and outreach programs, as well as technology evaluations. These issues, although definitely related and imperative to the successful ultimate realization of this effort, are significant in and of themselves, require involvement of many different entities to resolve and in many cases are current endeavors by many different groups (e.g. INGAA Executive Board Pipeline Safety Initiative on Public Awareness, OPS's Best Practices and Damage Prevention programs – just to name a few).

As a result and in an effort to focus this initiative and succeed, it is recommended that those peripheral but related issues be decoupled from this initiative and addressed in separate, focused initiatives using appropriate resources and organizations tailored to resolve the issues unique to each facet of this overall pipeline safety improvement movement.

Conclusion

It is apparent that the INGAA members already spends a significant amount of effort and money to meet the current regulatory obligations and that these requirements have been very effective as is evidenced by the envious and impressive safety record compiled over decades by the interstate gas pipelines. Nevertheless, INGAA members do not stand on our safety record alone and support an effort to look for opportunities to improve the effectiveness of the safety program. As a result, INGAA supports the OPS on this initiative and welcome the opportunity to work with you on it; but encourage a judicious and deliberate analysis of the current requirements to avoid creating an expensive and unproductive response that will not effectively accomplish that objective.

The cost impact of this proposal has the potential to be extraordinarily significant to individual pipeline operators, the industry as a whole, and the general public. In addition there are impacts to the environment and landowners along the pipeline right-of-way. In an effort to minimize the cost impact, environmental impact and yield the safety results, it is essential that safety benefits provided by and unique to the current gas pipeline requirement be delineated and that all available approaches to confirm integrity be kept available to industry. As was noted in the November public meeting, there is no "silver bullet" to resolve this issue and forcing one will result in extraordinary costs and little benefit to safety.

Additionally, the timing required to evaluate this issue, develop regulatory requirements, industry standards, develop operator plans and implement those plans is significant and must be appreciated. A systematic and methodical development effort is necessary for this subject. INGAA recommends that OPS utilize an advanced proposal of rulemaking proposal notice process for this initiative. In addition, when solutions are proposed, INGAA recommends a phased, multi-year deployment of any response or action against this initiative.

Should you have any questions or need any additional information, please do not hesitate to contact me at 202-216-5930.

INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Respectfully submitted,

January 18, 2000 By:

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